

17-4 H900 100

Work Order ID 103882

103882

Page 1

Wednesday, July 03, 2013 12:32:48 PM

Item ID: D3691-1

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: STUD

Start Date: 7/3/2013

Start Qty: 12.00

12

Cust Item ID:

Required Date: 7/15/2013

Req'd Qty: 12.00

12

Customer:

Reference:

Approvals:

Process Plan: *CL*

Date: *13/07/02*

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3691	E								

100

0.00

100

BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

DO NOT USE CHOP SAW

Cut blank 7.750" long

13-10-17

110

0.00

110

DOOSAN LATHE

Doosan

Memo

0.00

Doosan Lathe

1-Turn as per Folio FA716 Rev: _____ & Dwg D3691 Rev: _____ 2-Deburr
per dwg D3691
3-Check .625" bore with DT9530 GO/NO GO Gauge

13-10-18

160

0.00

160

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

13-10-18

DAS 40 9-89

13/10/25

12 13

12 13

12 13

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											

FAULT CATEGORY				
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

Work Order ID 103882

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Page 2

Wednesday, July 03, 2013 12:32:48 PM

Item ID: D3691-1 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: STUD
 Start Date: 7/3/2013 Start Qty: 12.00 *12* Cust Item ID:
 Required Date: 7/15/2013 Req'd Qty: 12.00 *12* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170 *170* QC Quality Control	QC8- Inspect parts - second check Memo 100% CHECK,CHECK ALL DIMENSIONS AND THREAD FIT	0.00 0.00		B.e 13/10/25		12	0		
171 *171* Purchasing Purchasing	Memo Liquid Penetrant Inspection as per QSI 038 Issue P/O: 21994 LPI as per dwg D3691 Attach copy of NDT results to work order	0.00 0.00							CX 13/11/08 (12)
173 *173* Packaging Packaging	Receive & Inspect for Damage & Mat'l Certs Memo	0.00 0.00							13/11/8 (12)

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">Skid-tube <input type="checkbox"/></td> <td style="width: 25%;">Crosstube <input type="checkbox"/></td> <td style="width: 25%;">Water Jet <input type="checkbox"/></td> <td style="width: 25%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

FAULT CATEGORY

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

Work Order ID 103882

103882

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Wednesday, July 03, 2013 12:32:48 PM

Item ID: D3691-1 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: STUD
 Start Date: 7/3/2013 Start Qty: 12.00 *12* Cust Item ID:
 Required Date: 7/15/2013 Req'd Qty: 12.00 *12* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
175	QC5- Inspect part completeness to step on W/O	0.00							
175						12			M/W 13-11-08
QC	Memo	0.00							
Quality Control									
180	Identify as per dwg & Stock Location: 5T225	0.00							
180						12x	DAS 28 9-89	13-11-12	
Packaging	Memo	0.00							
Packaging									
190	QC21- Final Inspection - Work Order Release	0.00							
190									13/11/13
QC	Memo	0.00							
Quality Control									

MC 13-11-13

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											

FAULT CATEGORY				
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other	

Picklist Print

Wednesday, July 03, 2013 12:32:47 PM

Page 1

Work Order ID: 103882

Parent Item: D3691-1

Parent Item Name: STUD

Start Date: 7/3/2013

Required Date: 7/15/2013

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP Rev:A New Issue 08-01-29 JLM Verified By:EC
IPP Rev:B Material Change 09-01-07 JLM Verified By:EC IPP REV:C AS PER REV D 10-03-16 JLM VERIFIED BY:EC
IPP Rev:C Added note on Step 2 09-01-26 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M174PH-H900R1.000 17-4SS H900 ROUND BAR 1.00		Purchased	No				f	27.1180		8.7643822		SA 13-10-17	

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT030	27.118	
117445	2.46	
120667	10.124	
121280	1.8	
121918	12.326	
121577	0.408	

126952

8.5 Lt

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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DART AEROSPACE LTD		Work Order:	103882
Description: Stud		Part Number:	D3691-1
Inspection Dwg: D3691	Rev: E	Page 1 of 1	

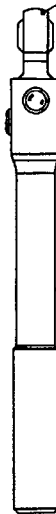
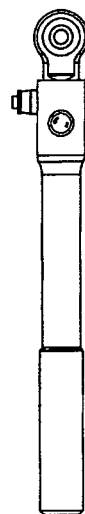
FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.695	+/-0.010	.695	/			
45°	0.5°	45°	/			
Ø.825	+0.004/-0.000	.625	/			
1.25	+0.000/-0.03	1.230	/			
118°	0.5°	118°	/			
R0.03	+/-0.030	R.03	/			
0.11 (Ref)	+/-0.030	.11	/			
90°	0.5°	90°	/			
Ø.189	+0.005/-0.001	.216	/			
1.31	+/-0.030	1.31	/			
1.65	+/-0.030	1.65	/			
0.750	+0.000/-0.010	.746	/			
Ø0.659	+0.000/-0.015	.650	/			
7.625	+/-0.015	7.627	/			
2.90	+/-0.030	2.90	/			
3/4-16UNF-2A	N/A		/			
0.075 x 45°	+/-0.010 x 0.5°	0.075 x 45°	/			
0.375	+0.000/-0.010	.372	/			
Ø0.216	+0.005/-0.001	.216	/			
R0.25	+/-0.030	R.25	/			
R0.50	+/-0.030	R.50	/			

Measured by:	<i>[Signature]</i>	Audited by:	<i>[Signature]</i>	Preliminary Approval:	
Date:	13-10-18	Date:	13/10/25	Date:	

Rev	Date	Change	Revised by	Approved
A	09.05.11	New Issue	KJ	
B	09.11.04	Dwg Rev updated	KJ	
C	10.03.31	Dimensions revised per Dwg Rev D	KJ	
D	13.02.27	Ø0.216 was Ø0.189	KJ	<i>[Signature]</i>

ITEM	QTY -041	P/N	DESCRIPTION
1	X	D3691-041	STUD ASSEMBLY
2	1	D3691-1	STUD
3	1	D3693-1	ROD END BEARING
4	2	HL32PB8-14	HI-LOK PIN
5	2	HL86-8	HI-LOK COLLAR



D3693-1 ROD BEARING

HL32PB-14 HI-LOK PIN
HL86-8 HI-LOK COLLAR
2 PL

D3691-1 STUD

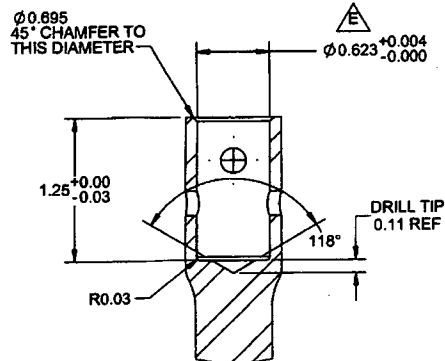
CL13/07/03
W10:163882

D3691-041 STUD ASSEMBLY

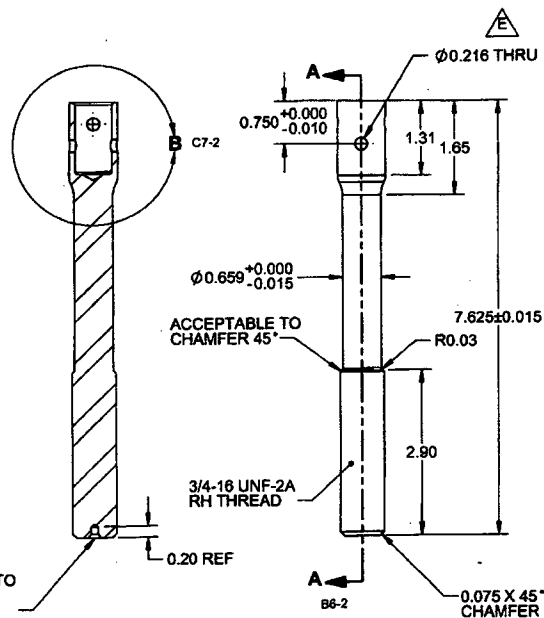
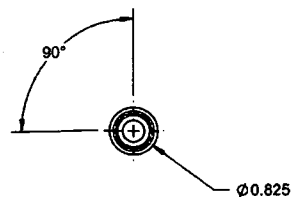
NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 1.04 lbs
- 8) ALIGN THE PILOT HOLES IN D3693-1 WITH PILOT HOLES IN D3691-1. ENLARGE EACH HOLE USING A P/N 13-420 PILOTTED DRILL (0.2314 DIA/0.2158 PILOT). REAM EACH HOLE USING A P/N 44-300 STEP REAMER (0.247 DIA/0.2314 PILOT). CLEAN AND DEBURR ALL HOLES PRIOR TO ASSEMBLY.
- 9) ASSEMBLE D3693-1 WITH D3691-1 USING HYSOL EA934NA OR MAGNOBOND 6398 ADHESIVE BETWEEN MATING SURFACES.

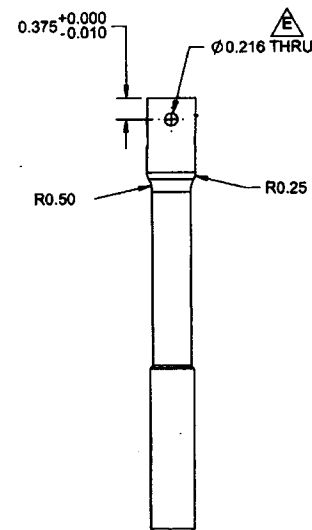
E	ADD -041 STUD ASSEMBLY, ASSEMBLY INSTRUCTIONS (ZN A8-1, ZN B6-1, ZN D7-1). Ø0.216 WAS Ø0.189 (ZN D2-2, D4-2). Ø0.623 WAS Ø0.625 (ZN D7-2). RE-FORMAT NOTES SECTION AS PER QSI 043 (ZN A8-1). REF NCR 12-2074.	DB	12.12.07
D	7.625 WAS 7.750 (ZN C4-1)	RF	10.03.03
C	0.20 WAS 0.16 & CENTER DRILL #4 WAS CENTER DRILL #2 (ZN B6-1). UPDATE NOTE 8 TO REF QSI (ZN A8-1)	RF	09.09.09
B	CHANGE TO 17-4PH H-900 (ZN A8-1). Ø0.695 WAS Ø0.665 (ZN D8-1) REFORMATTED TO CURRENT DWG STANDARDS	RF	08.11.24
A	NEW ISSUE	RF	08.03.12
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DB		
CHECKED	MB	DRAWING NO.	REV. E
MFG. APPR.	JLM	D3691	SHEET 1 OF 2
APPROVED	WJ	TITLE	SCALE
DE APPR.	#	STUD	NTS
DATE	12.12.07	<small>COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	



DETAIL B C5-2
SCALE 1:1



SECTION A-A B4-2



RELEASED
2013-01-22

NOTES:

- 1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5843 H-900 CONDITION
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.80 lb
- 8) LPI PER QSI 038 4.1.1 (ASTM E1417 LEVEL 2)

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	DB	HAWKESBURY, ONTARIO, CANADA	
CHECKED	MB	DRAWING NO.	REV. E
MFG. APPR.	JLM	D3691	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		STUD	NTS
DATE	12.12.07	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. WHO IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



LIQUID PENETRANT TEST REPORT

P- 12255

CLIENT Dart Aerospace DATE Nov 7 2013 PAGE 1 OF 1
ATTENTION Chantale, Linda, Andy ACUREN JOB NO. 188-B-10893 TIME AM ☐ PM ☒
ADDRESS 1270 Aberdeen PO/VO No. 21994
Hewkesbury, on WORK LOCATION As Address
PROJECT Pt-wet Fluorescent Liquid penetrant Inspection ACCEPTANCE STD. ASTM E1417/1418 REV./DATE 2005
ITEM(S) EXAMINED - see below

JOB DESCRIPTION PROCEDURE NO. LT-002 REV./DATE 2009 TECHNIQUE NO. LT-002 REV./DATE 2009
PART NO. MATERIAL Aluminium THICKNESS
SCOPE Performed a wet flow L.P.I on 100% of the external surface only on item
mentioned below

TEST DETAILS

METHOD ☒ FLUORESCENT ☐ VISIBLE ☐ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EMULSIFIED
FAMILY BRAND Magnaflux BLACK LIGHT S/N 3990 ☐ OUTPUT > 1000 μ W/cm² ☐ AMBIENT < 2 fc
PENETRANT 2L-6P MINIMUM DWELL TIME 15 MIN. LIGHTING EQUIP. ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100 fc @ SURFACE
PENETRANT REMOVER 140 MINIMUM DRY TIME >10 MIN. OTHER
DEVELOPER SKD S2 MINIMUM DWELL TIME 30 MIN. LIGHT METER S/N 1098866 CAL DUE DATE 11/20/13
DEVELOPER TYPE ☒ NON AQUEOUS ☐ AQUEOUS ☐ DRY

TEST SURFACE

SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☒ MACHINED ☐ SHOT BLASTED ☒ CLEAN BARE METAL
SURFACE TEMPERATURE ☐ < -4°C/ 20°F ☐ -4°C/ 20°F TO 10°C/50°F ☒ 10°C/50°F TO 52°C/125°F ☐ > 52°C/125°F
RESULTS- ☐ METRIC ☐ IMPERIAL

COMMENTS	ACCEPT	REJECT
1 Stud W.O ID 103531	✓	
2 12X Stud W.O ID 103882	✓	
3 10X Stud W.O ID 105447	✓	
4 11X Stud W.O ID 105606	✓	
5 13X Stud W.O ID 105607	✓	
6 12X Stud W.O ID 105609	✓	
7 Aft cross tube W.O ID 100703	✓	
8 Aft cross tube W.O ID 100704	✓	

Item ID 03688-7
Item ID 03691-1
Item ID 03688-7
Item ID 03688-5
Item ID 03688-3
Item ID 03691-1
Item ID 0407-667-205
Item ID 0407-667-205

No Relevant Indication was detected as per applicable standard at the time of inspection.

Scope of Services
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

CLIENT REPRESENTATIVE Andy Sheldon PRINT ASheldon SIGNATURE
TECHNICIAN (SIGNATURE): Alexandre Michon SIGNATURE
NAME (PRINT): Alexandre Michon 1st TECHNICIAN
CGSB LEVEL 2 SNT LEVEL 2 CGSB REG. NO. 10140
2nd TECHNICIAN
CGSB LEVEL _____ SNT LEVEL _____ CGSB REG. NO. _____
DTR # E-07054
REPORT REVIEWED BY: _____ NAME INITIALS

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CANARY - OFFICE COPY

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GOLD - OFFICE COPY